I Can Meet with Dead Scientists #Chapter 41 - 39 Tomato Sauce Goes on Sale - Read I Can Meet with Dead Scientists Chapter 41 - 39 Tomato Sauce Goes on Sale

Chapter 41: Chapter 39 Tomato Sauce Goes on Sale

After delivering a precise, piercing blow to Hook, Little Niu was in rare good spirits and treated Xu Yun to a broad bean sandwich on the street.

Looking at the sign of the Yage Hotel not far away, Xu Yun chewed on the dry bread, a hint of reflection surfacing in his heart.

According to the normal historical trajectory, a significant fire was going to occur in London in 1666.

Its impact was so profound that historians even named this disaster the 'Great Fire.'

After this fire, Hook displayed exceptional architectural talent, directly participating in London's reconstruction efforts. Consequently, it wasn't until the end of 1668 that he had the time to challenge Barrow at Trinity College.

Back then, Barrow found himself helpless against the problems Hook presented, facing ridicule and mockery from Hook in front of many students, which eventually alarmed the university's principal at Cambridge.

This ordeal led Barrow to fall seriously ill, and upon recovering in 1669, he resigned from his position as Professor Lucas, recommending Little Niu as his successor.

In the following years, Barrow abandoned mathematics, earnestly diving into theological studies, reminiscent of characters in local martial arts novels who, upon seeing through the world, cut off worldly ties.

Later, Barrow earned his doctorate in theology in 1670 and formally took up the position of Trinity College's dean in 1672, advancing to deputy principal of the University of Cambridge by 1675—though this illustrious resume recognized his theological achievements rather than mathematical.

Furthermore, from the end of 1673, Barrow was bedridden, passing away in 1677.

No one can say for certain whether Barrow's untimely death had direct ties to Hook's disruptive impact, but one fact is undeniably clear:

A leading Lucas Professor prematurely stepped down, shifting from mathematics to theology.

Bear in mind, Barrow had already acquired the sum and product of two functions and differential theorems—heights Little Niu could hardly reach at this point.

In terms of research progress, he was considered the leading figure in the field of calculus at the time!

Therefore, in certain circles, Barrow's assessment somewhat resembles those fallen stars in Romance of the Three Kingdoms.

With Xu Yun's appearance, Little Niu had coincidentally resolved a major disaster for his teacher but simultaneously created enmity with Hook, leaving the outcome uncertain whether good or bad.

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Twelve days flew by in the blink of an eye, and a new Sunday arrived.

Grantham.

Saint Titus Church.

Today, the entrance to the church was as crowded as ever, with deep and grand hymns faintly emanating from the building's interior, creating a spectacle even grander than Xu Yun's first visit.

This was the second Sunday of November, and according to seventeenth-century traditions on the British Peninsula, each month's second Sunday saw a large trade assembly organized based on the fourth administrative district across all of England.

The trade assembly commenced on Sunday afternoon, continuing until about two to three in the afternoon on Monday.

Hence, on this day, the church's worship bell rang an hour earlier than usual, and the service omitted the Holy Communion segment, giving everyone ample time to buy or sell goods.

Though seemingly a grassroots initiative, this assembly could never exist without and certainly did not happen without church district support.

In previous assemblies, churches also sold some Holy Books, portraits of Saints, or beverages, among other things.

But presently, the stall belonging to the Grantham District differed from previous ones:

No Holy Books, no portraits, just rows of fist-sized clay pots neatly arranged on a table.

Behind the table stood four or five large ceramic jars, with Xu Yun, Little Niu, the Williams family, and several church-attired helpers at the side.

According to the agreement initially established between Pastor Yalrin and William.

The district would extend the area selling tomato sauce to at least one-fifth of the East Midlands Region, with Grantham being just a small part of the map.

Considering this non-religious business might not fully align with the church's style, Yalrin delegated the assembly stalls to the Williams family.

The district only assigned a few people to assist with data statistics and some material logistics.

At this moment, Mrs. Williams wore a cotton-linen dress, a white headscarf wrapped around her head, and nervously wiped her hands on her apron:

"Dear, how long until the meeting ends?"

Compared to his wife, William Asku appeared much calmer, as he looked toward the town's clock tower and said:

"It should be soon, maybe five to ten minutes and..."

"Duang——"

Before William finished speaking, a deep chime echoed from the direction of the church.

This was the dismissal bell, signaling the end of worship.

In less than an instant.

Creak——

The two heavy church doors slowly opened, and a stream of people accompanied by a wave of body odor poured out.

Mrs. Williams's expression grew noticeably tense, as she hurriedly instructed Lisa and the others:

"Lisa, check the position of the spoon.....Elura, make sure the lids on the jars are secured....Andrea, where are the potatoes? Quickly bring them out!"

The assembly venue was located on a street beside the church, with the district's stall at the front of the street, serving as the only entrance.

With the exclusive possession of the cross sign, anyone who wasn't a starship player would inevitably see this stall upon entering the street.

...

Just leaving the church, Tiffany Boli held her son Dino's little hand, wrapped his slightly drafty scarf tighter, and asked:

"Dino, tell Mommy, did you listen carefully to today's Sunday School lesson?"

Eight-year-old Dino joyfully hopped on the pavement blocks and replied cheerfully:

"Yes, today was about Job's story. Hey, Mama, what's that?"

Tiffany Boli was smiling as she listened to Dino speak and instinctively turned her head upon hearing his question, finding Dino pointing at the stall at the market entrance.

She smiled, stroked her son's head, and said:

"Oh, that's the church stall. Shall we go have a look?"

Tiffany Boli's husband was a tailor in Grantham Town, with skilled craftsmanship that guaranteed a high income, making basic needs no worry for the middle-class family.

In August, Tiffany Boli had bought an Apostle Peter portrait at the assembly to hang at home. Unfortunately, not long ago, a cat ran into their house and shredded most of the portrait.

So since the beginning of the month, she had been planning to purchase another new portrait at the market.

When she led Dino close to the stall, a male voice echoed in her ear:

"Hello, would you like to try some newly launched tomato sauce? Free tasting!"

"Tomato sauce?"

Seeing the black-haired and black-eyed peculiar young man before her, Tiffany Boli swallowed the words she was about to say, asking curiously:

"What's that?"

The black-haired young man adeptly pushed a plate in front of her and picked up a small piece of potato cut into thin long strips from the side:

"This is a new sauce from the East, made with non-toxic tomatoes and guaranteed by the Grantham District. Look, there’s a handwritten letter from Pastor Yalrin here too.

The quantity is limited, available until sold out, feel free to try before deciding."

"Tomato, huh?"

Upon hearing the term, a hint of hesitation surfaced on Tiffany Boli’s face.

In her understanding, tomatoes were considered a poisonous food.

She glanced at the stall’s Grantham District sign and the church-attired personnel behind it, and the trust stemming from faith gradually outweighed the impressions formed by rumors.

As this tailor’s wife gingerly picked up a potato strip, dipped it lightly in the tomato sauce, and took a bite.

A moment later, her eyes brightened up:

"How is this sold?"

Across from her, Xu Yun smiled and held up two fingers:

"10 ounces of tomato sauce, only 2 pence!"

Chapter 42: 40 Zhang Returning to Reality (Seeking to be read!!!)

In the 21st century, countries generally use grams and kilograms for measurement units.

However, the concept of ’gram’ was actually only proposed in 1795, when it was defined in Gaul as "the absolute weight of a volume of water equal to a cubic decimeter at the melting point of ice."

Therefore, in the seventeenth century, the United Kingdom was still using the common system, which included drams, ounces, pounds, etc.

The common system differs from the troy system, wherein an ounce is approximately 28.3495 grams, whereas the latter is 31.1034768 grams.

By converting through the former, the ten ounces Xu Yun mentioned is just over 280 grams, roughly half a kilogram.

As mentioned earlier.

The main cost of homemade tomato ketchup lies in sugar, as a pound of tomato ketchup needs about 30 grams of sugar, which translates to approximately 18 ounces corresponding to 30 grams of sugar.

The current market price for sugar is about 8 pence per 100 grams, but the cost price for the district is much lower, around 2 pence—it is comparable to the internal price of tobacco or spirits, and sugar is even more ruthless because it is a plundered resource.

Therefore, after some calculations, the cost of ten ounces of tomato ketchup is about 0.6 pence.

Including other transportation, labor, and miscellaneous costs, it is about 0.8 pence or slightly more.

A cost of 0.8 with a selling price of 2 pence is actually considered cheap—according to normal thinking, with the premise that others can quickly replicate the product and enter the market, the price should be as high as possible.

But the Grantham District, after all, is not a professional chamber of commerce. The religious guise dictates that they cannot swindle people too harshly, or else a bad reputation would be not worth the gain.

So after some discussion, Yalrin finally set the price of tomato ketchup at ten ounces for 2 pence.

Once the market settles, this premium won’t be criticized too harshly—if it really doesn’t work out, you can use the blessing... ahem, blessing as a buffer.

"Ten ounces for 2 pence..."

Upon hearing Xu Yun’s offer, Tiffany Boli quickly did the math in her head:

The current average income in England is 0.65 Guinea, which is 150 pence, earning roughly one penny every two days.

The income of Tiffany Boli’s family is a bit higher than average; being able to settle in Grantham, their family’s annual income can reach about 1.2 Guinea.

Thinking about this, Tiffany Boli glanced at the jar beside her:

"Is this jar ten ounces?"

Xu Yun nodded:

"That’s right, a standard ten-ounce weight."

Tiffany Boli nodded slightly.

Ten ounces (280 grams) of ketchup looks like a lot, even if her family uses it every day for bread and potatoes, it wouldn't be finished in ten days to half a month.

It's more expensive than butter, but much cheaper than sugar; even ordinary families can afford it.

Thus, after only a slight hesitation, Tiffany Boli made up her mind:

"Sir, may I have ten ounces, please?"

"Alright!"

Xu Yun promptly brought out a bottle and whispered:

"Madam, this bottle of ketchup was freshly made and taken from the back, so it's fresher than the others; please don't tell anyone else."

Tiffany Boli was initially thinking of bargaining, but upon hearing this, she felt a sudden joy—she clearly saw that Xu Yun indeed took the jar from the back area.

So she immediately stopped bargaining and happily handed over two pence:

"Thank you very much, please accept these two pence."

Xu Yun politely accepted the money and handed it to the district staff beside him, watching them record the transaction.

Then he glanced around and, taking advantage of the gap when no one was around, moved a can of ketchup from the front to the vacant spot in the back...

As Xu Yun completed this covert operation, someone suddenly touched his left arm.

Xu Yun turned around and found a small girl standing beside him without knowing when she arrived.

The person who could move freely around here was none other than William's little daughter, Lilani.

However, at this moment, Lilani was holding not dung but a cup of steaming water.

Xu Yun blinked, seemingly understanding something, and pointed at himself:

"For me?"

Lilani nodded.

Seeing this, Xu Yun couldn’t help but feel a bit surprised:

This little rascal seems to have become much more low-key and well-behaved since last meeting?

This was good—not that girls must be quiet and conform to the three obediences and four virtues, but at the very least, they should not be rascals.

He then took the cup, checking for anything unusual inside while pretending to blow on it, then took a small sip:

"Thank you, Lilani."

Lilani was silent for a few seconds, suddenly uttering a word:

"Last time... sorry."

After saying that, this former little rascal turned around and trotted off.

Xu Yun couldn’t help but scratch his head:

"This kid..."

.....

Tiffany Boli’s purchasing process was just a glimpse of the stall today. With the district’s endorsement, William’s family almost didn’t need to spend much effort in selling jar after jar of ketchup easily.

Tasting—introduction—collecting money.

The process was that simple.

Three hours later, today’s market was in the closing stage—this was only today’s closing; following the custom, the market would continue for another day tomorrow.

Saint Titus Church would temporarily provide an internal area for merchants to stay overnight.

In a way, this is similar to future events that include accommodation, as it is a way for the official to stimulate the economy.

Just as Xu Yun was getting ready to help tidy up the venue, Little Niu suddenly pulled him aside mysteriously:

"Fat Fish, we're going to make a fortune!"

Seeing this founder with stars in his eyes, Xu Yun's curiosity was piqued:

"Oh? Mr. Newton, how much ketchup did we sell today?"

Little Niu cautiously looked around and whispered a number:

"Nine hundred pounds!"

Upon hearing this number, even Xu Yun couldn't help but click his tongue:

"Wow, nine hundred pounds?"

Nine hundred pounds translate to over fourteen thousand ounces.

According to William and their ten-ounce per jar specification, that's over fourteen hundred jars of ketchup.

One must understand.

The resident population of the main city of Grantham is only about 3-4000 Thousand People, even during the market period, the gathered population barely exceeds around twenty thousand.

More importantly, each jar of ketchup corresponds not to one person but one family!

Even deducting some scenarios of affluent people buying repeatedly, the purchase rate of this batch of ketchup wouldn't be below 15%!

Thus, one can imagine the size of the market for ketchup throughout Europe—of course, the condition is still there: it's a market that cannot be monopolized.

"The cost of one jar of ketchup is 0.8 pence, with a net profit of 1.2 pence...."

At this moment, Little Niu's mind, which ranks among the top few in history, was calculating basic math quite shrewdly:

"1400 x 1.2 is 1680, divided by 252 is 6.67 Guinea, our share is one-third, that's 2.2.....

Oh God, this is only three hours, in only one Grantham! How long can one jar of ketchup last a family?"

With this, Little Niu gave Xu Yun a firm pat on the shoulder:

"Fat Fish, I now declare, we are friends!"

Little Niu’s slap was quite forceful, and Xu Yun was caught off guard and almost stumbled.

"Can you be gentle..."

Xu Yun grumbled as he rubbed his shoulder, ready to lift his head and say something, when he suddenly felt the surroundings pause, and the long-awaited prompt board appeared before him:

[Newton has regarded ’Wall-Facer’ as a drinking buddy, the novice quest is complete, dungeon time has stopped, preparing to return to reality!]

Xu Yun:

"?????"

.....

Note:

The next Chapter should be quite interesting, hopefully....

Chapter 43: Chapter 41: Deducing the Timeline!

At the stall.

With the appearance of the prompt board, Xu Yun suddenly discovered that everything around him had suddenly come to a halt:

For example, at a stall seven or eight meters away from him, a vendor was arguing intensely with a customer, seemingly about to break into a scuffle, but both of their expressions suddenly froze, looking like two lifelike inflatable dolls.

Another example is the boss at the fruit stall not far away, lounging with crossed legs, tossing an apple with one hand, and the apple abruptly stopping in mid-air. Newton would probably be rolling in his grave...er, wait, Newton was also present at the scene.

Xu Yun turned around to find Little Niu grinning widely, with a bean sprout clearly stuck on his back molar.

Completely still, as if frozen.

Grantham, no, or rather the entire space-time of the year 1665....

Just stopped without any warning.

In the entire world, only Xu Yun’s life continued at -1s.

Soon after, a halo quietly appeared beneath his feet, slowly enveloping his whole body.

Xu Yun was quite familiar with this halo—clearly, as the prompt indicated, his novice task was complete, and he was about to return to reality.

And in the last moment before disappearing, the thought that drifted through Xu Yun’s mind was...

Goddamn fair-weather friends!

So, all the effort I put into helping you solve a bunch of academic problems wasn’t worth a few Guineas, huh?

Master Niu, that’s so you!

Then again another dizzying sensation similar to when he arrived, and when Xu Yun came back to his senses, he was once again in that enclosed space.

At this moment, three doors still floated in front of him, but the one on the far left representing the space-time of 1665 had turned a dark gray, with the original ’100/100’ becoming ’0/100’.

This scene wasn’t unfamiliar to Xu Yun over the past decade—it indicated that if he wanted to reopen that door, he needed to at least meet the requirement of knowledge points returning to 100.

As to whether these knowledge points are only related to degrees or knowledge reserves, it requires further research.

Besides the entire door turning gray, Xu Yun also noticed that there was a dark gold small box placed on the ground in front of the closed door.

After a few seconds of thought, Xu Yun decisively walked forward and picked up the box.

Though this space seemed mysterious, if it really wanted to harm him, it could have turned him into a corpse or Ah Wei a decade ago.

As soon as the box was in hand, it suddenly transformed into another fluorescent screen:

[Detection complete, ’Wall-Facer’ novice task accomplished, would you like to proceed with evaluation?]

FBIWarning:

Due to the current dungeon selected by ’Wall-Facer’ having a multi-node mode, this simulation result is for scoring purposes only, the in-dungeon time is locked, and if ’Wall-Facer’ re-enters, it will automatically resume at the screen during exit, would you like to continue?

Two options were below:

[Yes][o戟把k]

Xu Yun: "..."

So this thing is indeed problematic, right?

But then again, despite the flashy dialog box, the information it reveals is significant:

According to the dialog box, the halo will simulate something similar to a sandbox based on Xu Yun’s previous actions for a certain scoring assessment.

The time inside Little Niu’s space-time gate is locked, meaning Xu Yun will see Little Niu’s back molar the next time he enters.

He sighed somewhat wistfully and clicked the ’Yes’ on the left.

Soon, the dialog box began to change.

[Evaluation system activating...permission verification complete...timeline simulation starts!]

[Theoretical simulation]:

’Wall-Facer’ met the mainline character Newton in the ’1665’ dungeon, revealing the following theories within the rules:

1. The phenomenon of light dispersion.

2. Refraction angle integral (Yang Hui’s Triangle)

3. Taylor expansion. (Partial)

4. Infinitesimal series approximation.

5. Saint Venant’s theorem. (Partial)

6. Stress balance theory (concept)

[Character line summary as follows]:

1. Isaac Newton

2. The William Asku family

3. Robert Hooke

4. Isaac Barrow

5. Yaling Dilat

6. Tiffany Boli

7. Several passersby.

[’Meng Die’ deducing...]

[Results generation]....

[Academic Achievement]:

Due to Wall-Facer’s influence, the current available academic weighted summary quantity is [4], with weighting items arranged in ascending chronological order:

Due to ’Wall-Facer’ intervention, Isaac Newton proposed the equation of light dispersion at the end of December 1665, formally introduced the concept of infinitesimal series in March 1666, and proposed the Newtonian binomial theorem.

And merged binomials (m/n dimensions) with circular logarithms, proposing the discrete algebraic equation model (1－X2)=(1－X2)1/2 · (1－X2)1/2 = X＋X2＋X3＋...＋Xn and (1－η2)=η＋η2＋η3＋...＋ηn .

[Mathematical weighting: 9]

In April 1666, Isaac Newton derived the ’Han Li expansion’ third-order, preliminarily consolidating the proprietary fluxion technique model, and successfully derived the law of universal gravitation, which had been scheduled for publication in 1687’s "Mathematical Principles of Natural Philosophy" but was published earlier in 1679.

[Core Theory Weighting: 17]

In the field of elasticity, Newton proposed in 1674 the theory that ’there is a linear relationship between the stress and strain in a material after a solid material is subjected to force’, expressed as F=k·x, later known as the Newtonian mechanics law, which future generations further derived into a triple expression of the generalized

Newtonian mechanics law, and content involved in the national college entrance examination was raised to 31 points.

[Mechanics Variation Weighting: 13]

Due to the influence of the refraction angle integral proposed by ’Wall-Facer’, Newton was more certain of the particle nature of light than in history, and the integration derivation equation perfectly explained most optical problems at the time, giving him an absolute advantage in debates with Hewgins.

[Particle Theory School in Historical Status Coefficient Weighting: 6]

Academic weighting: 9+17+13+6=45

[Modern Impact]: No access available.

[Related Character Changes] (ascending order):

Reuben Holland:

Tiffany Boli’s husband, former chief tailor of Grantham ’Bohr Clothing Store’, after tasting ketchup for the first time in early December 1665, astutely foresaw the demand for consuming tomatoes, mortgaged properties in early 1666 to establish a tomato plantation, later becoming the largest fruit supplier in Lincolnshire and nearby areas.

Yaling Dilat:

Pastor of Saint Titus Church in Grantham Town and seventh executor of the Lincolnshire District, brought great profits to the district by promoting ketchup, and was promoted in July 1666 to Deputy General Secretary of the Nottingham District, proposed civil rights legislation increases during the drafting of the "Bill of Rights", later respected as Saint Dilat.

Lilani Asku:

The youngest daughter of William Asku, gradually became withdrawn after ’Wall-Facer’ unexpectedly disappeared, dropped out of school at 15 to work, went to Netherlands Leiden University at 19 intending to find the ’Wall-Facer’, but unfortunately perished in a shipwreck.

.....

(To be continued)

.....

Note:

Changed the cover, cost me 15 bucks! Hands on hips! (The reason is the original was an identical Qidian intelligent cover, at a glance there are twenty or thirty books like it....)

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**Chapter 44: Zhang 42 Newbie Task Rewards**

In the enclosed space.

Looking at the latest speculative results about Lilani, Xu Yun’s expression slightly changed:

Although he had noticed some differences in the child’s attitude towards him, he didn’t expect her future to be so deeply influenced by him.

To be honest.

When Xu Yun interacted with Lilani, this child was merely five years old, so Lilani’s feelings toward Xu Yun were clearly not the kind of affection understood by adults.

At that point in time, the William couple was always worried about their lost goods, Elura and Andrea formed a small circle exclusive to twins, and the eldest sister, Lisa, was absorbed in her friendship with Little Niu.

Hence, Lilani’s social circle was very closed; no one understood or even cared about her.

This was a major factor in her becoming a troublesome child — to put it bluntly, she hoped to gain recognition through rebellion.

In this context, Xu Yun’s ’punishment’ for Lilani was very different, leaving an indelible mark on her young heart.

Meanwhile, in the speculative virtual history, Xu Yun’s disappearance was without any warning:

Perhaps after a period of crowding, or perhaps upon waking up, Xu Yun suddenly vanished.

This situation was another huge psychological blow to Lilani.

Thus, multiple factors combined, leading Xu Yun to become an unerasable obsession in Lilani’s heart.
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If you were to say Lilani liked or even ’loved’ Xu Yun deeply, that clearly was not possible — unless that child was also a reincarnator, a five-year-old girl couldn’t understand what love is.

Her actions were more about giving her childhood an answer, giving herself closure.

Just like how many fishing enthusiasts hope to catch a big fish, not to eat, but to fill a void in their hearts.

But unfortunately...

This girl was unlucky and perished on the voyage.

But fortunately, this was just a speculative evaluation, not an established reality.

Lilani from the time when Xu Yun returned was still a young girl with unresolved issues.

Then Xu Yun let out a long breath and continued reading.

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Elura Asku, Andrea Asku:

William Asku’s twin daughters, who in the original history married in 1671 due to poor family conditions and malnutrition, and passed away at 38 and 41, respectively.

Now, due to Wall-Facer’s intervention, the twins gradually received adequate nutrition before adulthood, married normally, had children, and both died at 66 in the same year.

William Asku couple:

Isaac Newton’s uncle and aunt, who, due to Wall-Facer’s intervention, not only paid off their debts but also became the largest tomato sauce distributors in Lincolnshire.

Later, desiring political status, William entered politics in early 1686, and in October 1688 was knighted by James II.

A month later, with the Glorious Revolution nearing its end, James II fled to France, and William’s knighthood was revoked by the new king. After paying a large fine, he was released and returned to Woolsop disheartened, where upon examining his family tree, he discovered a trace of African blood in his ancestry.

Xu Yun: "..."

Come on, this one is also a standard old unlucky figure; he previously lost a lot of money in business.

Afterwards, his gaze slid down again, and his expression gradually grew solemn.

According to the dialogue box’s prompt, the character results are arranged in ascending order.

That is to say, the remaining characters are more significantly influenced, either directly or indirectly, by him.

Isaac Barrow:

Isaac Newton’s teacher, Professor Lucas at Trinity College, University of Cambridge, who, in original history, resigned due to Robert Hooke’s reasons and devoted himself to theology, dying young at 47.

In the ’1665’ dungeon, under the influence of the Wall-Facer, Barrow continued his research on mathematical theory.

In 1668, Barrow and Newton co-authored the article "Formula Lectures," proposing differentiation, calculating the length of curves, substitution of variables in definite integrals, and even the embryonic form of the implicit function differentiation theorem.

In 1673, Barrow was appointed Vice-Chancellor of the University of Cambridge, and in 1680 he officially became the Chancellor, initiating campus reforms.

In 1683, Barrow improved the solution of higher-order equations and proposed the embryonic form of the transition from geometric methods to analytical methods, prompting related theories of Euler, Lagrange, and Laplace to be advanced by several years to several decades.

In 1685, Barrow proposed series theory, leading to a major breakthrough in the concept of functions, and authored the classic mathematical work "Number Theory Fundamentals."

In later generations, Barrow was called ’Newton’s most solid arm’, ’the giant who lifted up the giant’, etc....

In the mathematical community, Barrow’s status is equivalent to Fourier’s in Wall-Facer’s history, belonging to one of the great founders of mathematics.

[Special Weight: 6]

After reading Barrow’s deduction results, Xu Yun couldn’t help but breathe a sigh of relief.

Although in the past period, he had never even seen Barrow’s face, nor did he know if he was tall, short, fat, or thin.

But from the perspective of a later mathematical and physical researcher, he naturally hoped to see such a person not buried by history.

In the long history of human civilization, there have been countless geniuses like Barrow who were extraordinarily talented but perished prematurely.

Among these people, Barrow, who could leave manuscripts, was actually considered fortunate, as later generations could know and admire his achievements a little.

But some people's fate was even more tragic than Barrow's, unable to make even a splash, withering silently and soundlessly.

Possibly, in a war or a famine, a genius originally able to stand shoulder to shoulder with Newton or Einstein might have perished early. Such things are unpredictable.

Therefore, from the perspective of a researcher, Xu Yun genuinely felt happy for Barrow.

It's just a pity that the Barrow in the native history could not be changed, otherwise the acceleration of modern mathematics by twenty or thirty years should not be a problem—as for how much this would increase the difficulty of high school and university mathematics, Xu Yun did not care. After all, he had already graduated from university, and those juniors and sophomores' courses... of course, the harder the better!

What does the failing course of the juniors have to do with me?

Subsequently, Xu Yun adjusted his mood and looked at the second to last name.

Robert Hooke.

Robert Hooke, in the original history, was the proposer and founder of multiple physical theories and the discoverer and namer of cells.

Influenced by the 'Wall-Facer', in 1665 Robert Hooke challenged Barrow and failed, diverting a lot of energy to the deducing and analyzing of linear strain of the medium occupying space, but he was unable to break through for several years due to a lack of mathematical tools.

In April 1672, Hooke proposed the concept that light waves are transverse waves but was strongly refuted the following month by Newton using the dispersion equation.

In March 1674, Hooke proposed a theory of planetary motion, but before the letter was sent, Newton publicly disclosed the square ratio formula of the elliptical orbit.

In August of the same year, Newton proposed what would have been Hooke's law in 1678 as 'Newtonian mechanics laws', overshadowing Hooke.

With Hooke finding no further path, he turned his efforts to optical instruments but two weeks before a related theoretical breakthrough, saw Newton publish the refraction angle product formula.

In 1675, Hooke developed the balance spring. Although Newton had not announced any research progress at the same time, on the day Hooke's paper was released, Ilo Bliss bore Barrow's third child.

In 1682, Hooke, afflicted by depression, died 21 years early.

However, due to Hooke continuously being overshadowed by Newton on this timeline, Hooke's posthumous portrait was fortunately preserved and not destroyed.

In later generations, people called Hooke 'the great biologist', 'the founder of optical instruments', with nicknames such as 'British Zhuge Liang', 'Great Britain Experience Baby', etc.

Xu Yun: "...."

He then lowered his gaze to the last part of the dialogue box.

[Worldline deduction completed, the next start time of '1665' dungeon will be based on the 'Wall-Facer' progress]

[Current dungeon locked time: 1665.11.8] (I checked the 1665 calendar, 1st was the first Sunday, the second Sunday's market is the 8th)

[Newbie task: Heard you have a lot of things you can't let go? Be a little carefree!]

[Task Difficulty: ★☆☆☆☆]

[Task Requirement: Become friends with young Isaac Newton in any sense. Do not easily involve any historical events in which the person did not participate]

[Task Completion/Expected Completion (Weighted Score): 51/4]

[Task Comment: You turned a task completed just by giving Newton your spectacle into changing the timeline. You must have misunderstood the four words newbie task. You are beyond help, wait for death, goodbye!]

[Task Settlement... Reward confirmed!]

A moment later.

Before Xu Yun appeared three reward items: a card, a golden egg, and a piece of parchment.

Xu Yun instinctively reached out to touch them, and they floated towards him, while the related information was projected into Xu Yun's mind:

[Newton's 30-Minute Thought Experience Card] X1: Activating it will allow you to briefly possess the peak speed of 22-year-old Little Niu and engage in a mental battle of strength with Yan Ruyu!

[Real-Life Mystery Egg] X1: blah blah blah.....

[Fifth Generation Imidacloprid Formula] X1: This is a good thing, but it's not that easy to really master it.

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**Chapter 45: Chapter 43: The 4th Generation That Must Be Overcome**

Inside the enclosed space.

Looking at the three virtual items in front of him, Xu Yun's expression was somewhat subtle.

Temporarily putting aside the Easter egg, from the description, it's not hard to see that it should be something that needs to be triggered by combining with some real-life situations. There are currently no clues to make a judgment.

To Xu Yun, in light of his recent experience of achieving a 5 times zero critical hit with an 80% critical rate barbarian, there's no guarantee he will ever activate an Easter egg in his life...

The agony of low luck, only those who understand will understand.

After temporarily putting aside the Easter egg, only two items remained.

First, was Little Niu's Thought Experience Card.

How should I put it...

Without a doubt, it's a good thing!

As a founding figure of modern physics, Little Niu's intelligence is undoubtedly a towering peak in human history, conservatively placed in the top ten for sure.

Especially the 22-year-old Little Niu from 1665, probably no one in history could match him in battle.

Thus, the quality of this Thought Card is indisputable, the only concern is its usage time.
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Half an hour, which for Brother Dong could mean 15 battles, but in solving problems, half an hour is quite a limited time period; it’s not much time, but not insignificant either.

Especially when facing some difficult problems, two or three hours are often necessary, and on some math forums, spending four or five hours on a problem is quite standard.

Therefore, once this Thought Card is used, it must be used wisely, timing is of utmost importance.

Then Xu Yun shifted his gaze to the piece of parchment, which supposedly contained the reward of the fifth-generation Imidacloprid formula.

Considering there’s neither a desk nor a pen in the space, making it unsuitable for research and calculation, Xu Yun thought for a moment and silently recited ’return’ in his mind.

Whoosh——

The space disappeared in an instant, and his consciousness returned to his little room.

After regaining his composure, Xu Yun didn’t rush to summon the Imidacloprid formula, but first looked down at.....

his own feet.

At this moment, his feet were bare, without shoes or socks.

Exactly.

The pair of Anta shoes, or the Brogue shoes gifted by Little Niu, both did not return with him.

Seeing this, Xu Yun couldn’t help but stroke his chin:

"So, items on me that meet specific conditions will travel with me to the Dungeon, but items from the Dungeon cannot be brought back?"

Then, he thought of something and looked at his ankle again:

The first time he visited William’s house, Little Niu once took him to chop wood, during which Xu Yun’s left ankle joint was pressed and swelled red, and over time it failed to subside, even forming an abrasion.

But right now, the skin on Xu Yun’s left ankle was smooth, showing no signs of pressure or abrasion.

Additionally, due to the 17th-century living standards over the past two weeks, Xu Yun’s body inevitably picked up some peculiar odor, and his clothes weren’t particularly clean.

But at this moment, these odors had long vanished.

Xu Yun glanced at the clock on the table, it was 4:27 in the afternoon, exactly as when he entered the space.

"So..."

"I soul-traveled to the 17th century, but items on me seem selectively to manifest in the Dungeon?"

"For instance, modern-styled things like glasses and clothing that existed technically in that era travel with me, while phones and earphones are automatically blocked?"

Xu Yun thoughtfully stroked his chin, after this comparison, the mapping relationship between the Dungeon and reality became much clearer.

It’s a pity that I didn’t think it through enough before, I should have tried to get a haircut at Little Niu’s place to see if my hairstyle would change after returning.

Then he came to the desk, extended his hand, and concentrated his attention to sense.

Zoom——

The next second, a piece of parchment gently fell into his hand.

On the parchment was a dense array of chemical symbols and Chinese characters, some of which had complex chemical structures that were dizzying at a glance.

However, as a doctoral candidate in biology, Xu Yun easily discerned the initial parts of the chemical structure.

C9H10ClN5O2, which is 1-(6-chloropyridin-3-ylmethyl)-N-nitroimidazolidin-2-ylamine, the scientific name.....

Imidacloprid.

It is a nitromethylene systemic insecticide, classified as a chloronicotinyl insecticide, also known as neonicotinoid insecticide, formally proposed at the 1991 United Kingdom Brighton Crop Protection Conference.

It acts on the nicotinic acetylcholine receptors, disrupting the insect’s nervous system transmission of chemical signals, primarily used for controlling pests with piercing-sucking mouthparts and their resistant strains.

In agriculture, it is mainly used for controlling aphids and leafhoppers, whereas in daily life its biggest application is eradicating various household pests.

Since its market introduction in 1991, it has rapidly gained popularity, spreading to over forty countries worldwide within just three years.

As of today, it can be said that where there is plant protection, there is Imidacloprid; currently, Imidacloprid is the world's number one insecticide, with its global sales reaching 1.14 billion US dollars in 2014.

However, even such a product that has risen to the altar has not had an easy time these recent years.

Firstly, there is the issue of pest resistance arising from long-term use. With the widespread use of Imidacloprid, a large number of greenhouse pests have developed resistance to it—quite similar to the inevitable resistance developed with widespread antibiotic use.

Secondly, because Imidacloprid acts on the nAchR target, it has the defect of serious failure after multiple transmissions, causing a diminution of effect.

So currently, the efficacy of Imidacloprid has been shrinking, like a queen-bee stepping down to become a Madame.

In the field of nicotinic insecticides, Imidacloprid is classified as the first-generation nicotine insecticide, Thiamethoxam as the second generation, and Flonicamid as the third generation.

As for Imidacloprid in its domain, the current Imidacloprid is an optimized version of the third generation.

Exactly, just the third generation.

The Imidacloprid from the novice mission's reward claims to be the fifth generation, implying that...

There's an entire generational technical barrier between it and the existing Imidacloprid.

There's a rule in pharmaceutical development, that there must be progressiveness between 'generations,' and skipping generations is impossible.

Just like there's a gap between button phones and foldable smartphones that requires intermediate smartphones with virtual keypads to fill in, without an intermediary product, the chasm between generations is almost insurmountable.

In other words.

For Xu Yun to turn the fifth-generation Imidacloprid into a producible new product, he must break through the fourth-generation technical barrier.

Then Xu Yun further unfolded the parchment, hoping to gain some inspiration.

"ClC1N=CC(=CC=1)CN2C....."

"Exact molecular weight 255.05200..."

Quickly, Xu Yun’s gaze locked onto a line in the Mol formula:

0.0000 N 0 0 0 0 0 0 0 0 0 0 0 0

10.1936 4.2021 0.0000 N 0 3 0 0 0 0 0 0 0 0 0 0

11.3603 3.1516 0.0000 O 0 0 0 0 0 0 0 0 0 0 0 0

10.5200 5.7378 0.0000 O 0 5 0 0 0 0 0 0 0 0 0 0

8.2153 2.2238 0.0000 C 0 0 0 0 0 0 0 0 0 0 0 0

6.6453 2.2238 0.0000 C 0 0 0 0 0 0 0 0 0 0 0 0 .

Meanwhile, a large set of information flashed quickly through his mind.

After about two minutes, Xu Yun slapped his forehead:

"My goodness, is it really this thing?"

....

Note:

Perhaps I didn’t explain clearly enough before, causing some friends to think that this book was doomed, and they helped summarize a bunch of issues.....

Um, actually, it’s like this, our book has always had good follow-up readings. By ’life or death day,’ I didn’t mean an ordinary recommendation, but rather the best new book opportunity, even better than Sanjiang, with only seven spots out of four to five hundred books per phase on the entire starting point.

Besides, today the results were announced, and I successfully advanced with the little trumpet, even among the top few. Thank you!

Lastly, regarding the mol formula, I got it from a friend who works in a drug research institute. Precise, isn’t it?

Chapter 46: Chapter 44 Tian Liangwei

USTC, as a member of Huaxia's C9 League, ranks absolutely in the top tier in both education and research in the country, with no shortage of high-end laboratories and scientific talents.

For instance, cold atom physics, the quantum communication lab led by the most handsome person in USTC, Marshal Pan, and then there's...

Biomedical sciences.

Central District of Ke Da, Medical Center Building.

Although a few years ago, USTC moved the School of Life Sciences to the West District, and even relocated the accelerator there slightly to accommodate the various related facilities.

However, in terms of research foundation, the Medical Center in the Central District is still more profound than the one in the West District.

The Medical Center Building is next to Building No. 8, next to which there is an old Sichuan restaurant, where the Mao Xue Wang is simply the best at USTC and priced friendly, making its business quite booming.

Behind it is the Shuimu Hotel, where every weekend a bunch of couples would... cough cough, let's not digress.

The USTC Medical Center is an independent research module, orange and brown on the outside. It's rumored that there's always a bunch of Viet Cong-like security personnel hidden around, and you never know which tree or trash can is actually a human cosplayer; however, unfortunately, it seems no one has ever truly seen them.

Upon entering the main entrance, Xu Yun proactively walked to the reception desk:

"Hello, access code USTCXXXX....."

Today is the weekend, and working at the reception desk was a part-time student worker, a petite yet sweet-looking girl wearing glasses, appearing to be a quiet and shy young lady.

She expertly tapped on the keyboard a few times, then glanced at Xu Yun for a facial recognition check:

"Identity verified, senior. Can you briefly state your intention of visit? I need to make a record."

"The immunology research lab on the fourth floor, I have something to discuss with Dean Tian."

"Oh dear.. cough cough, OK, senior, you may go up."

".... Thank you."

After completing the necessary information record, Xu Yun walked to the elevator and pressed the button for 4.

The elevator ascended slowly and soon reached the fourth floor.

After leaving the elevator, Xu Yun proceeded to the left for about ten meters, stopped at an office door, and raised his hand.

Knock, knock, knock——

In less than a moment, a male voice came from inside:

"Please come in."

Xu Yun smoothly pushed the door open and entered.

This was a small office, about twenty square meters.

Opposite the entrance was a desk, with a row of bookshelves beside it. On the left side of the entrance was an L-shaped small sofa and a set of coffee tables, making up a small reception area.

Sitting at the desk was an elderly man looking to be in his fifties, round face with short hair, appearing very amiable.

This person was the Dean Tian Liangwei of Keda Life Science College, an academician of the Huaxia Academy of Engineering and also Xu Yun’s doctoral advisor.

Physics has Marshal Pan, biology has God Tian. This perfect combination of advisors was achieved after Xu Yun spent a lot of effort in degree pursuit.

Capable, willing to support juniors, and not greedy for credit, such advisors are indeed hard to find.

Of course.

The relationship between mentors and students is often mutual; students long for a good mentor, and mentors equally hope to receive good students.

And Xu Yun obviously fitted the latter’s criteria. Therefore, seeing Xu Yun enter, Tian Liangwei’s already amiable round face became even softer:

"Xiaoxu, shouldn’t you be focusing on your doctoral defense instead of coming here? You’re not planning to ask me for the identities of the external committee members and take shortcuts, are you?"

Students who have participated in doctoral defenses should know that the reviewers are generally 5-6 people, with at least two being experts from outside institutions, which is a tougher hurdle to pass.

Therefore, many doctoral students seek to understand the reviewers’ identities beforehand, preparing tailored defense strategies, a more common practice abroad.

But obviously, Tian Liangwei’s words were a joke. Given Xu Yun’s capability, taking such extra measures for the doctoral defense is unnecessary.

Xu Yun walked to the desk, familiarly pouring a glass of water for both Tian Liangwei and himself, downing it in a gulp:

"You’re joking, teacher. Can’t it be that this student just wanted to check on your health, sparing weekend blanket time to visit you?"

Hearing this, Tian Liangwei exaggeratedly raised both hands to his forehead, as if reverencing a god:

"Oh my, oh my, I must oblige. God Xu has spoken; how can this Mortal not believe?"

Then he gestured towards the window with his chin, striking a seasoned pose:

"Also, I have a suggestion for you. Next time you visit, go downstairs to the fruit shop and buy a four-yuan box of dragon fruit. Mention this, and it might just add some persuasion. Oh, make sure it’s White Fire Dragon Fruit, the Red Fire Dragon Fruit is heretical."

Without a thought, Xu Yun blurted out:

"Can I expense it as part of my research funding? If possible, I’ll buy two more boxes next time."

Tian Liangwei: "..."

Then he coughed lightly, ceased the joking, and asked:

"Alright, on a serious note, what brings you here today?"

Seeing Tian Liangwei becoming serious, Xu Yun also straightened his expression and brought up the real issue:

"Teacher, yesterday while writing my thesis, I suddenly thought of something. I spent a night on a simple calculation and derivation, and it seems somewhat feasible, so I came to you today for assistance."

"Oh? What is it?"

"Are you familiar with Imidacloprid?"

"Imidacloprid?"

Tian Liangwei nodded. Although his main research focuses on immunity and chronic diseases, being one of the academicians of the Huaxia Academy of Engineering, he was naturally not unfamiliar with the neurotoxic insecticide that has been around for over thirty years.

"It’s the first-generation neonicotinoid insecticide, now independently optimized to the third generation. Over the years, its broad-spectrum efficacy has gradually weakened, and it’s even lagging in some aspects. Why, do you have some ideas?"

Xu Yun did not directly answer the question but continued asking:

"Teacher, do you think Imidacloprid still has research prospects?"

"It’s hard to say. Most institutions domestically and abroad are still working on it, but progress has been very slow."

Tian Liangwei shook his head, pointing his index finger to the floor:

"For example, our Creative Intelligence Laboratory on the third floor has been studying this kind of issue, but there hasn’t been much progress. Unless Imidacloprid can be independently optimized to the fourth generation, the current market will only shrink."

Saying this, knowing Xu Yun somewhat well, Tian Liangwei faintly sensed something, and asked:

"Xiaoxu, do you have any new ideas regarding Imidacloprid?"

Xu Yun nodded, pulling out a paper with notes and summaries from his pocket:

"I have a bit of a shallow idea, teacher. Please take a look at this."

Tian Liangwei took the paper, spread it flat, slightly shook it, and picked up a pair of reading glasses from the desk, reviewing it seriously.

After a while, his pupils slightly contracted, and he looked up sharply at Xu Yun:

"Pheromones?"

....

Note:

Some readers were concerned about the mol form in the last Chapter revealing something, so here’s an explanation, consider it an Easter egg. It’s actually the mol formula of a digestive tablet... but slightly modified.

Also, after checking, a sore throat caused by inflammation of the tonsils.

Chapter 47: Chapter 45 Turn Cockroaches into Protected Animals!

"Pheromones?"

Inside the office.

Looking at the surprised face of Tian Liangwei, Xu Yun nodded affirmatively:

"That’s right, I think the entry point for the Fourth Generation Imidacloprid is pheromones."

Tian Liangwei adjusted his glasses slightly, his expression somewhat serious and perplexed:

"Explain in detail? Xiaoxu, don’t tell me that your method is simply mixing pheromones with imidacloprid in composition— I can buy you twenty sticky sheets for the pheromone of clothes moths for ten bucks on Taobao."

Pheromones, also known as exohormones.

They are substances secreted by one individual to the exterior, detected by other individuals of the same species through olfactory organs, causing the latter to exhibit certain behaviors, emotions, psychological or physiological changes.

For example, adult humans emit pheromones, and there’s even a type of perfume called pheromone perfume for sale.

There is still a debate in the scientific community about the exact composition of human pheromones, but the more widely accepted substances are the male androstenone and the female estratetraenol.

The most abundant areas of pheromones are the armpits and groin, so try smelling those areas—does it differ from the scent on other parts of the body?

Back in high school, Xu Yun had a friend who always said that the scent of a girl in their class was pleasant. Out of curiosity, Xu Yun tried to take a sniff during lineup for the break exercises.

Well, it was a faint scent of body odor.

This reflects the different feedback pheromones provide: those who like it, love it passionately, and those who are indifferent, really dislike it.

So, to some extent, saying "your armpit scent is lovely" could actually be considered a romantic sigh...

In the field of insect pests, the application range of insect pheromones is extensive.

The advantage of pheromones is their strong target specificity, not harming beneficial insects, and no risk of pesticide residues. However, the downside is also their strong specificity, ineffective against other pests, and only effective on adult insects, not the larvae.

Thus, pheromones currently have relatively high limitations, regarded as a supplementary means.

Basically, they are used to attract insects and then trap them with sticky boards or boxes for further treatment.

A more advanced method is mixing pheromones with biological toxins, kneading them together as if making dough, and then attracting pests to consume the poison...

Facing Tian Liangwei’s concerns, Xu Yun first poured him a cup of tea, then said:

"Teacher, I understand your point. Rest assured, I’m not exploiting conceptual loopholes."

He then took out paper and pen, writing as he explained:

"My thought is whether we can use some synthesis technique to combine pheromones with imidacloprid into a new potent poison?

For example, it would possess the alluring function of pheromones while also having the multigenerational spreading effect of imidacloprid? Meaning the pheromones would spread along with the imidacloprid?"

Glancing at Xu Yun’s stream of writing on the paper, Tian Liangwei vaguely understood:

"Synthesize a new type of poison? I think I get your idea a little.

Commonly blended drugs attract targets with pheromones, and after consuming the poison, it spreads, but since it doesn't carry pheromones, the multigenerational spread curve's effect won't be ideal.

Your idea, Xiaoxu, is for the poison to have the pheromones' effect too, so when the target leaves the bait, it becomes a new pheromone-emitting bait itself, even capable of multigenerational transmission?"

Xu Yun nodded and confirmed:

"Exactly, that's what I envision for the direction of the Fourth and even Fifth Generation Imidacloprid."

Tian Liangwei pondered carefully, still bearing a somewhat pessimistic expression:

"Technically feasible on paper, but there are many challenges to resolve.

Firstly, the target is single; a pheromone for one insect species only works on adults of that same species. For example, the moth sticky board I mentioned only catches moths, but cannot catch other flies or mosquitoes.

Secondly, synthesizing this involves overcoming corresponding informational barriers, which is tremendously challenging, or else those well-known companies or labs would have done it already."

As he spoke, Tian Liangwei couldn't help shaking his head.

As he said, almost all current pheromone poisons are made by physically blending methods.

This production method doesn't accuse production companies of being incompetent because they couldn't synthesize pheromones with biological toxins into a new substance.

As an authoritative figure in domestic biological hospitals, Tian Liangwei is well aware of how difficult it is to synthesize pheromones with biological toxins. Currently, companies like Bayer, Pfizer, Luo Family, and Novartis are researching in this direction.

A breakthrough in this technology wouldn't cause much of a stir in the scientific community, let alone a Nobel Prize, not even close to a Karolinska or Lasker award. However, the market it reflects is not negligible.

Of course.

Most of these labs are not combining Imidacloprid as the target but with the third-generation Fipronil.

After all, in those cutting-edge labs, Imidacloprid is like comparing Aoi to Xing Teachers—different eras entirely.

Seeing Tian Liangwei reminisce about some not-so-great memories, Xu Yun remained calm, writing another line on the paper:

"Teacher, take a look at this."

Tian Liangwei instinctively looked at the paper, and after a while, he hesitantly said:

"Is this... methylated alkane?"

Xu Yun nodded, drawing a line across one of the CH3 to represent its removal.

Tian Liangwei uttered softly:

"Single-handed methyl?"

Xu Yun continued to write another line:

CH3(CH2)2CH=CHCH=CH(CH2)8CH3, [Ru(p-cymene)_2Cl_2]_2, (HCHO)n, ZnBr_2, CH_3COON, DCE (CH2CLCH2CL) along with a pyridyl functional group.

"Teacher, do you think this reaction could succeed?"

Upon seeing Xu Yun’s list, Tian Liangwei was initially stunned, then quickly picked up a pen, swiftly calculating on the paper and mentally:

"Remove a CH3... Cyclize the C-H bond... Cut the substrate C-H bond through transition metal catalysis?

Form a directing group intermediate C-M... Huh? It might actually selectively hydroxymethylate with pyridine?"

As everyone knows.

The hydroxymethyl functional group is widely present in drugs and biologically active small molecules. It performs nucleophilic addition on aldehydes, yielding corresponding alcohol, ether, or ester products.

If you remove one CH3 at the upper right of the pheromone alkane and apply Ru catalysis, it theoretically could form a compound with pyridine.

Nonetheless.

This is just a theoretical possibility, with tremendous uncertainty in practice.

Watching his teacher’s expression grow solemn, Xu Yun continued:

"As for your first point..... Yes, pheromones indeed have that limitation.

The target for one kind of pheromone is always one kind of organism—moths are moths, fruit flies are fruit flies, there’s no cross-reference, nothing anyone can change.

So why don’t we simplify this into a targeted screening?"

"Targeted screening?"

Tian Liangwei lifted his eyes, looking at Xu Yun with curiosity:

"What do you mean by this?"

"It’s focusing research in one direction, disregarding others."

Xu Yun shrugged at his teacher, smiling:

"The entire biological toxin field is so vast that there’s no need or ability to cover it all. Since that’s the case, why not choose a harmful pest and develop a targeted, special-effect pesticide?"

"Admittedly, there are many agricultural pests—kill the wireworm, and there’s the cutworm; kill the cutworm, and there’s the bollworm. Unless they’re all exterminated, it’s hard for agricultural products to be free of pests, but besides agriculture, there are many pests around us. Exterminating one of these pests solves a significant problem, offering a much higher cost-effectiveness than agriculture."

"Once this new compound is produced, a certain pest might just be eradicated into a protected species, visible to the next generation only in zoos."

"Like..."

"Cockroaches!"

Chapter 48: Chapter 46 A Crucial Big Step.

Cockroaches, generally referring to insects that belong to the order Blattaria, are part of the phylum Arthropoda, class Insecta, order Blattaria.

This species has survived on Earth for over 350 million years, even longer than dinosaurs.

However, in the entire ecosystem, the significance of cockroaches is actually not that great.

Of course, that's not to say they are completely useless — they possess the nature of decomposers in the natural world, which can accelerate the decomposition of organic materials into inorganic substances.

Moreover, they even have some value in the medical field. For example, Yunnan Baiyao's peptide toothpaste contains cockroach extract, which means you might be kissing a cockroach every day.

But compared to the harm they bring, these contributions are simply insignificant.

Cockroaches carry multiple pathogens like Shigella, Salmonella paratyphi A, Escherichia coli, Pseudomonas aeruginosa, Proteus mirabilis, as well as roundworm, hookworm, etc., making them major vectors of disease, yet they do not fall ill themselves.

Additionally, due to their flat bodies, cockroaches are adept at living in tiny crevices, surviving almost anywhere there is water and food. Thus, they also venture into computers, copiers, electronic scales, water dispensers, and various communication devices and electronic instruments.

Once they chew through wires or components, causing a short circuit, it can lead to equipment malfunction, communication disruptions, and other unforeseen incidents.

Historically, behind almost every plague, there's been the fluttering wings of cockroaches involved.

Therefore, the notion that cockroaches are utterly useless is untenable, but the harm they cause is undoubtedly greater than their contributions.

Besides, the role of cockroaches as decomposers is not irreplaceable, at least within cities:

For instance, mealworms can perfectly substitute cockroaches in waste decomposition facilities, with even lower costs.

As for cockroaches in the natural world...

That's not within the range Xu Yun plans to eradicate.

Xu Yun made it clear earlier; he intends to eradicate cockroaches in ’living areas,’ that is, urban pests like the German cockroach, American cockroach, and Oriental cockroach.

The primary reason cockroaches are so hard to eradicate is that female cockroaches only need to mate once in their lifetime to lay eggs indefinitely.

After mating, a female cockroach grows a bean-pod-like object at the end of her abdomen, called an ootheca, where the eggs are laid.

A female cockroach can produce as few as over a dozen oothecae, or as many as over ninety, with each ootheca yielding as few as ten, or as many as over fifty young cockroaches. This is one of the main reasons why it’s so hard to completely eliminate cockroaches.

If a pheromone could be synthesized with imidacloprid to create a new poison, it would undoubtedly be a huge help in eradicating cockroaches.

"Targeted eradication of cockroaches..."

In the office, Tian Liangwei’s gaze was somewhat deep as he stroked his chin and asked Xu Yun:

"Not pursuing broad-spectrum research, but focusing on one species, Xiaoxu, are you planning to go into business?"

Tian Liangwei’s tone wasn’t accusatory, but it subtly carried some opinions.

In this day and age, it’s not frowned upon for researchers to start companies.

On the contrary, whether at home or abroad, almost every capable expert starts a company or collaborates with institutions.

Earning money with knowledge is just like licking your own teacher, not shameful.

Domestically, the age threshold is roughly 65 — top scholars above 65 engaged in industry are fewer, while experts under 65 almost all have some involvement in the business sector.

For example, Tian Liangwei has a collaboration with Jilin University Medical Department, focusing on NK cell research, all legal and compliant, unlike those needing to pay billions in back taxes.

However, considering Xu Yun’s current age, Tian Liangwei is still a bit uneasy about him getting into industry right now.

In his view, Xu Yun could first hone his skills within Ke Da’s research module for a few years.

Once he has enough experience, capability, and social connections, he could then consider starting a business.

After all, as one of the country’s top-tier universities, Ke Da offers excellent research benefits, and many make millions or tens of millions through patent royalties by the age of thirty, without it being considered a waste of youth.

Facing his teacher’s slightly diplomatic question, Xu Yun hesitated for a few seconds, finally saying:

"I do have that plan, but definitely not now — we haven’t even developed the fourth-generation imidacloprid yet, how could I start a company without the technology?"

"Besides, even if I do plan to start a company by then, I would definitely seek help from our school, hail Ke Da People after all."

Xu Yun’s final words were both a compliment yet also partly heartfelt.

After all, with the backing of Ke Da, whether in entrepreneurial support or networking resources, it’s unparalleled compared to venturing into the sea alone — never mind that Ke Da ranks after Qingbei Jiaofu, in terms of heritage, Ke Da, National Science University, and Harbin Institute of Technology are the domestic top three giants.

"Alright, I respect your idea."

Seeing that Xu Yun’s words subtly revealed some attitude, Tian Liangwei didn’t persist, steering the topic back to the present:

"So tell me, Xiaoxu, what do you plan to do now?"

Xu Yun took out a neatly folded piece of paper and handed it to Tian Liangwei:

"Teacher, I’d like to apply for a pharmaceutical chemistry laboratory, here’s the equipment list."

Tian Liangwei took the paper and muttered to himself while looking it over:

"Conductivity meter... gradient liquid chromatography.... drug dissolution tester... fully automatic refractometer..... hmm? Electro-pulse remelting and resolidification device and ICP-MS700?"

Tian Liangwei put down the list, tapping his index finger lightly on the table:

"Xiaoxu, other equipment is fine, but these last two items... are a bit troublesome."

The electro-pulse remelting and resolidification device and ICP-MS700 are equipment from national major scientific research instrument development projects.

The latter is cheaper, at over seven hundred million, but the former is nearly fifteen million.

Such equipment is naturally fine if the applicant is an academician, but Xu Yun is just a doctoral student, applying for an independent lab, honestly, it’s a bit overstepping.

"There’s no way around it, teacher."

Xu Yun also wore a trace of bitterness on his face, shaking his head lightly:

"The short-term precision of ICP-MS700 is much higher than ICP-OES and GFAAS, and when it involves the matrix acid interference of methyl groups, the advantages of ICP-MS are significantly superior, without these two pieces of equipment, how can we manage?"

Tian Liangwei glared at him in a somewhat annoyed manner:

"Sure, the equipment is good, but why don’t you mention that the startup cost of ICP-MS700 is four times that of the latter two? Not considering the price, comparing a Bentley with a BYD, right?"

Then he sighed lightly, took a separately stored application form from the drawer, and pushed it in front of Xu Yun:

"Fill it out."

Xu Yun took the form, ready to write, his eyes suddenly catching the lower right corner of the application form:

"Huh, teacher, something’s off here."

"What’s off?"

"How come the stamp on this form is your personal seal?"

Tian Liangwei sipped his goji berry tea and rolled his eyes at Xu Yun:

"What a fuss, you don’t qualify to apply for this level of equipment, so I diverted a quota from this year’s Hundred Talents Program for you, rest assured, all procedures are compliant.

Also, let me remind you, be careful when using the equipment, if you break it, sell yourself to repay the debt, alright, alright, enough talk, don’t dawdle, hurry up and fill it out, and get lost once you’re done!"

Looking at the seemingly impatient Tian Liangwei, Xu Yun remained silent for a moment, took a deep breath, and leaned down to start writing the application.

Over twenty minutes later, the application was completed.

Tian Liangwei took the form, glanced over it, smacked his lips:

"Hmm, looks pretty decent, but although you can apply for instruments as per a doctoral supervisor’s level, don’t expect funding to be at the same tier, and you have to recruit your own independent research team, at best you’ll get meal reimbursement and maybe one or two team-building activities."

"The research team is no problem, I already have my candidates."

Xu Yun calmly replied, then asked:

"Teacher, if the funding won’t be at the same tier, by how much will it be reduced?"

Tian Liangwei pondered and said:

"The funding for biotoxin research is generally released in stages, the first phase for a doctoral supervisor level would be about two to three million, and subsequent funding depends on your results; for Nobel Prize level research, even a hundred million isn’t impossible.

As for you... I’ll try to secure an equipment budget of five hundred thousand for you, thirty thousand for materials, five thousand for miscellaneous expenses, and an additional fifty thousand from the department, totaling nine hundred thousand, of this, cash flow is four hundred thousand, that’s about it."

Xu Yun nodded lightly, a slight surge of excitement rising within him.

Nine hundred thousand funding, this figure isn’t huge to Xu Yun — in his past life, not to mention nine hundred thousand, he had participated in national projects worth nine million or even nine billion.

But this nine hundred thousand is different from before, it might pave the way for a significant unexplored field, helping Xu Yun, and countless others, fulfill a lifelong desire...

To kill cockroaches!